<div align="center">**REMARKS**</div>

Claims 1 and 3-31 were pending and stand rejected. Claims 1, 13, 16, 18, 24, and 26 have been amended.

103(a) Rejection Based on Chandrasekaran and Hamada

Claims 1, 3, 7-12, 16-17, 20-25 and 28-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chandrasekaran in view of Hamada. Applicant respectfully traverses. As amended, claim 1 recites (emphasis added):

A method of handling a message received at a messaging system server, the method comprising:
    storing, in non-persistent storage, the message;
    determining whether the message has been delivered;
    if the message has been delivered, removing the message from the non-persistent
        storage; and
    **after a configurable delay interval has elapsed, if the message has not been
        removed from the non-persistent storage, saving the message to persistent
        storage so that the message can be retrieved and delivered.**

A message is stored in non-persistent storage. A determination is made regarding whether the message has been delivered. If the message has been delivered, the message is removed from the non-persistent storage. After a delay interval has elapsed, the message is saved to persistent storage if the message still remains in the non-persistent storage. The delay interval is configurable.

Initially storing a message in non-persistent storage enables rapid access to the message for retransmission during the delay interval. This enables message retransmission without introducing additional latency caused by retrieving the message from persistent storage. Since initially storing the message in non-persistent storage reduces the time needed to access the message, overall system performance is increased. Saving the message to

persistent storage after the delay interval has elapsed beneficially frees space in the non-persistent storage for recent messages, which increases system performance while also providing continued access to older messages from the persistent storage for later retrieval and delivery. Additionally, storing the message to persistent storage beneficially ensures that the message will not be lost in the event of network or power failure and makes the message accessible for subsequent analysis or delivery attempts.

Neither Chandrasekaran nor Hamada discloses, teaches, or suggests the claimed element "**after a configurable delay interval has elapsed**, if the message has not been removed from the non-persistent storage, saving the message to persistent storage so that the message can be retrieved and delivered" (emphasis added).

Chandrasekaran discusses a system for propagating (transmitting) a message from a source site 200 to a destination site 202 (abstract). The source site tracks messages using a propagation queue 204 and a propagation table 212 (7:61-63; FIG. 2A). The propagation queue, which is in volatile memory, stores information about a message that is awaiting transmission (7:63-65). The propagation table, which is in non-volatile memory, stores a history of the messages that have been transmitted (8:66-9:2).

In Chandrasekaran, a message saved in the propagation queue is transmitted as follows: First, the message is "dequeued" (removed) from the propagation queue (7:17-19). Next, the message is assigned a propagation sequence number (7:19-21). Finally, the message is transmitted (7:28-30). The propagation sequence number, the UID, and an initial propagation state are then stored in the propagation table (7:30-32).

As explained in Amendment and Response to Office Action C, dated March 7, 2006, Chandrasekaran does not disclose, teach, or suggest "saving the message to persistent storage

so that the message can be retrieved and delivered." However, even if Chandrasekaran did disclose "saving the message to persistent storage so that the message can be retrieved and delivered," Chandrasekaran does not disclose, teach, or suggest saving the message <u>after a configurable delay interval has elapsed</u>. Chandrasekaran mentions that after a message has been transmitted, the propagation sequence number, the UID, and an initial propagation state are stored in the propagation table (7:30-32; 11:8-10). However, Chandrasekaran does not mention a <u>delay interval</u> before the storage occurs, let alone a <u>configurable</u> delay interval.

The only disclosure of time relative to the messages in Chandrasekaran regards timestamps which identify the ordering of messages in the propagation queue. Rather than determine how long a message is stored in non-persistent storage before being saved to persistent storage, the timestamps in Chandrasekaran merely determine in order in which message data was inserted into the propagation queue (7:1-13). The timestamps merely indicate the order in which messages should be dequeued from the propagation queue and propagated to the destination site and does not measure, or otherwise indicate, a delay interval during which a message is stored in non-persistent storage and indicating <u>when to store the message in persistent storage</u>.

Thus, Chandrasekaran does not disclose, teach, or suggest the claimed element "after a configurable delay interval has elapsed, if the message has not been removed from the non-persistent storage, saving the message to persistent storage so that the message can be retrieved and delivered."

Hamada does not remedy this deficiency. Hamada discusses a message transmitting process where "the content of the message ID and the content of the message are also stored in the non-volatile memory" (17:46-48). In Hamada, the storage of messages in non-volatile

memory is not responsive to a delay interval having elapsed. Rather, as shown in FIG. 23 of Hamada, all guaranteed messages are stored in non-volatile memory before they are transmitted (FIG. 23, steps S4, S5). At step S4, the message ID and the content of the message is stored in non-volatile memory before the message has been transmitted (17:46-48). Once the message is saved in non-volatile memory, "a request is made to the supervisor 104 with the content of the message together with the corresponding message identifier MSG ID1 for a message transmission" (17:51-53). Hence, all guaranteed messages are stored in non-volatile memory before they are transmitted. In contrast, the claimed invention does not save the message into persistent storage until after a delay interval has elapsed. This is particularly advantageous because unlike Hamada, the claimed invention does not unnecessarily access persistent storage which can be computationally expensive and time consuming. Thus, Hamada teaches away from the claimed invention.

Therefore, Hamada does not disclose, teach, or suggest the claimed element "after a configurable delay interval has elapsed, if the message has not been removed from the non-persistent storage, saving the message to persistent storage so that the message can be retrieved and delivered."

Therefore, claim 1 (as amended) is patentable over Chandrasekaran and Hamada, alone and in combination. Independent claims 16 and 24 (as amended) recite similar language and are also patentable over Chandrasekaran and Hamada, alone and in combination, for at least the same reasons.

103(a) Rejection Based on Chandrasekaran, Hamada, and Stein

Claims 4-6, 13-15, 18-19, and 26-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chandrasekaran in view of Hamada further in view of Stein. Applicant respectfully traverses.

Independent claim 13 recites "dynamically determining a delay time period" and "after the determined delay period has elapsed, if the message has not been removed from the non-persistent storage, saving the guaranteed message to persistent storage so that the guaranteed message can be retrieved and delivered." Since that language is similar to the language of claim 1, the arguments above are hereby incorporated to apply to amended claim 13.

As explained above, neither Chandrasekaran nor Hamada discloses, teaches, or suggests the claimed element "**after a configurable delay interval has elapsed**: if the message has not been removed from the non-persistent storage, saving the message to persistent storage so that the message can be retrieved and delivered" (emphasis added). It follows that neither Chandrasekaran nor Hamada discloses, teaches, or suggests the claimed element "**after the determined delay period has elapsed**, if the message has not been removed from the non-persistent storage, saving the guaranteed message to persistent storage so that the guaranteed message can be retrieved and delivered."

Stein does not remedy this deficiency. Stein discusses enabling clients to perform electronic mail services when the network is unavailable (abstract). At most, Stein discloses pre-loading channel resources into a memory, specifically a persistent storage, during electronic mail channel processing by a mobile device (7:51-58). Stein saves all resources to persistent storage so that the mobile device can subsequently access the resources regardless of network availability. Thus, Stein saves all channel resources to persistent storage <u>before</u>

they are transmitted. In contrast, the claimed invention does not save a message into persistent storage until <u>after a delay interval has elapsed</u>.

Thus, Stein does not disclose, teach, or suggest the claimed element "after the determined delay period has elapsed, if the message has not been removed from the non-persistent storage, saving the guaranteed message to persistent storage so that the guaranteed message can be retrieved and delivered."

Therefore, claim 13 is patentable over Chandrasekaran, Hamada, and Stein, alone and in combination.

The claims not specifically mentioned above depend from claims 1, 13, 16, or 24 (directly or indirectly), which were shown to be patentable over Chandrasekaran and Hamada (claims 1, 16, and 24) or Chandrasekaran, Hamada, and Stein (claim 13), both individually and in combination. In addition, these claims recite other features not included in claims 1, 13, 16, or 24. Thus, these claims are patentable over Chandrasekaran and Hamada (claims 3, 7-12, 17, 20-23, 25, and 28-31) or Chandrasekaran, Hamada, and Stein (claims 4-6, 14-15, 18-19, and 26-27), both individually and in combination, for at least the reasons discussed above, as well as for the elements that they individually recite.

Applicant respectfully submits that the pending claims are now allowable over the cited art of record and requests that the Examiner allow this case. The Examiner is invited to contact the under signed in order to advance the prosecution of this case.

Respectfully Submitted,
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Date: <u>April 23, 2008</u>

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